

## REMARKS

Claims 1- 16 stand rejected. Claim 1 is herein amended. No new matter had been added.

The rejections shall be taken up in the order presented in the Office Action.

1. Claims 1-16 have been rejected under 35 U.S.C §112, second paragraph. As set forth in the specification on page 2, lines 10-24, and page 5, lines 1-3, the underwater sounds source resonates when the monopole driver excites the fluid column. In view of the foregoing, it is respectfully submitted that one of skill in the art would understand the bounds of claims 1-16 when read in light of the specification. Therefore, it is respectfully requested that the indefiniteness rejection be withdrawn.

2. Claims 4-16 have been rejected under 35 U.S.C. §112, first paragraph. As set forth in the specification on page 4, lines 17-19, spherical monopole drivers are well-known in the art. Attached hereto is printout from the homepage of the International Transducer Corporation, [www.itc-transducers.com](http://www.itc-transducers.com) depicting a commercially available spherical monopole driver. In view of the foregoing, Applicants respectfully request that the non-enablement rejection be withdrawn.

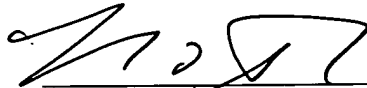
3. Claims 1-3 have been rejected under 35 U.S.C. 103(a) as being unpatentable over McMahon et al. ('470) in view of Piquette ('439, '741). Claim 1 has been amended. Claim 1 now recites an underwater sound source having a monopole driver suspended within the housing. It is respectfully submitted that the above references, either alone or in combination, fail to suggest the claimed underwater sound source.

5. The undersigned notes the additional prior art of record and agrees with the Examiner that this additional prior art neither anticipates nor renders obvious the claimed invention.

Attached hereto is a marked-up version of the changes made to claim 1 by the current amendment. The attached page is captioned "**Version with markings to show changes made**".

For all the foregoing reasons, reconsideration and allowance of claims 1-16 is respectfully requested.

Respectfully submitted

A handwritten signature in black ink, appearing to read 'R. Stevens, Jr.', written over a horizontal line.

Richard L. Stevens, Jr.  
Registration No. 44,357  
Samuels, Gauthier & Stevens  
225 Franklin Street, Suite 3300  
Boston, Massachusetts 02110  
Telephone: (617) 426-9180  
Extension 123

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the Claims:**

Claim 1 has been amended as follows:

1. (Amended) An underwater sound source which comprises:

a housing having an inner and an outer surface, the housing being adapted to receive fluid therein to form a fluid column inside the housing; and

a monopole driver [positioned] suspended within the housing, the underwater sound source resonating when the monopole driver excites the fluid column.



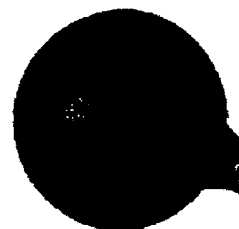
## Spherical Omnidirectional Transducer

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### Model ITC-1001

The Model ITC-1001 spherical transducer offers a broad band omnidirectional transmitting and receiving response with efficiencies greater than 50% over the entire band

This transducer is fabricated of high precision Channelite-5400 lead zirconate titanite ceramic hemispheres. The Model ITC-1001 is well suited for high power noise sources and applications where a truly omnidirectional response is required.



**Model ITC-1001**

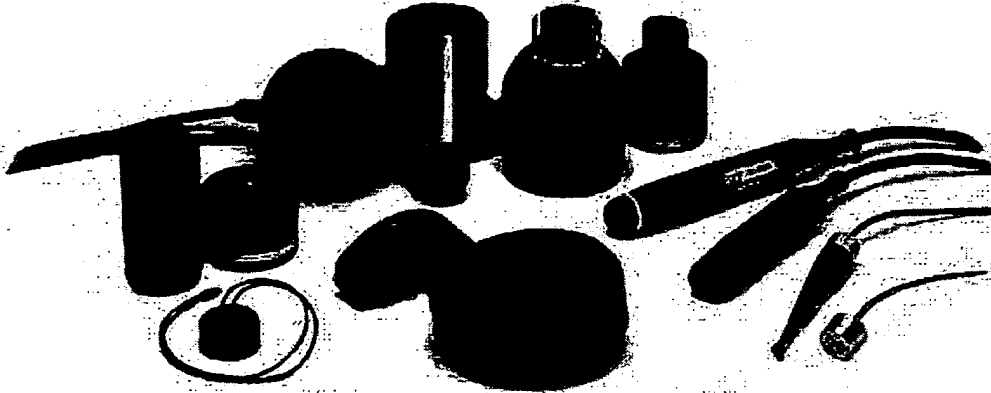
Dia: 4.2

### Specifications (Nominal)

<b>Resonance Frequency</b>	16.5 kHz
<b>Usable Frequency Range</b>	(see graphs)
<b>Beam Pattern (5.0 to 25.0</b>	
Horizontal	omni
Vertical (over 270)	omni
<b>Efficiency</b>	
5.0 to 35.0 kHz	>50%
16.5 kHz	> 50%
<b>Input Power (&lt;10% D.C.)</b>	2000W
<b>Operating Depth (max)</b>	2000 ft.
<b>Cable</b>	DSS-3 (10 ft.)
<b>Weight (water)</b>	~1.2 lbs.
<b>Weight (air)</b>	~2.5 lbs.



**International Transducer Corporation**



***Leading Manufacturer of Acoustic Transducers for:  
Ship and Submarine Sonar, Oceanographic Survey, Seismic Exploration,  
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**International Transducer Corporation**

869 Ward Dr, Santa Barbara CA 93111  
Tel: 805-683-2575 Fax: 805-967-8199  
Email: [sales@itc-transducers.com](mailto:sales@itc-transducers.com)